It's clear that teens and young adults today are operating in a different technological environment than previous generations, but the impact this environment is having on their relationship to libraries is less certain.

Many public library staff members have told the Pew Research Center's Internet Project that they want to build connections with younger patrons but often have difficulty maintaining these connections as the youth age. We find some evidence of this in our research. For instance, even though older teens (ages 16–17) are one of the age groups most likely to have used a public library in the past year, more than a third of recent library users in the next older age group (ages 18–24) say their library use has decreased within the past five years. And younger respondents in general are less likely than older adults to say that libraries are important to them and their families.

In order to shed more light on these issues, and the potential role for public libraries and librarians going forward, this article brings together findings from three major pieces of work the Pew Internet Project has done in the past year: an overview of technology in teens' lives; the role of libraries in the lives of older teens and young adults; and the impact of the Internet on middle and high school students' research habits.

The Technology in Teens' Lives

An overwhelming 95 percent of teens ages 12–17 use the Internet as of September 2012. Most teens (78 percent) now have a cell phone, though fewer (37 percent) own a smartphone specifically.

Overall, about three in four (74 percent) teens are "mobile Internet users" who say they access the Internet on cell phones, tablets, and other mobile devices at least occasionally. Yet while many teens have a variety of Internet-connected devices in their lives, the cell phone has become the primary means by which many of them access the Internet. In fact, 50 percent of teen smartphone users say they use the Internet mostly with their phone.

While cell phones and smartphones tend to be "owned" by a teen personally, adoption rates of other devices, such as e-readers or tablets, might instead reflect shared household use. For instance, even though 93 percent of teens have a computer or access to one at home, 71 percent say that the computer they use most often is one that they share with their parents, siblings, or other members of their family.

It's worth noting that even with all of these screens, teens' reading habits are still grounded in print. Some 90 percent of 16–17-year-olds read at least one book in 2012, with 85 percent reading at least one book in print, making them more likely to have done so than any other age groups. Meanwhile, just 25 percent of these older teens read an e-book in that time (a rate on par with the general population).

Teens and Social Media

We also know that social media is an important, and growing, part of teens' digital experiences, but the landscape has shifted in recent years. Among teen Internet users, 81 percent use social networking sites. Some 94 percent of teen social media users say they have an account on Facebook. Moreover, Twitter use is on the rise: 24 percent of online teens use Twitter as of September 2012, up from 16 percent in 2011.

Though Facebook is by far the most popular social media platform and a central part of many teens' social lives, its popularity can also be a downside. In focus groups, many teens complained about the increasing adult presence on Facebook (including parents and school administrators), as well as "oversharing" and "drama" among their peers; some are turning to less popular services such as Twitter, Instagram, or Tumblr to carve out a small niche for themselves, in addition to maintaining a presence on Facebook.

"I think Facebook can be fun, but also it's drama central," a 14-year-old in one of our focus groups said. "On Facebook, people imply things and say things, even just by a like, that they wouldn't say in real life." A 16-year-old described her approach to the various social media...
Learn More: Teen Gadget Ownership

Among American teens ages 12-17:

- 93% of teens have a computer or have access to one at home. 71% of teens with home computer access say the laptop or desktop they use most often is one they share with other family members.
- 78% of teens now have a cell phone. This includes the 37% of teens who have smartphones (up from just 23% in 2011).
- 23% of teens have a tablet computer, a level comparable to the general adult population.


Public Libraries in Teens’ Lives

Our research has found that younger Americans’ usage of public libraries includes a blend of traditional and technological services. Looking broadly at the activities of Americans ages 16-29, for instance, we found that these younger Americans are just as likely as older adults to have visited a public library in person in the past year. Once there, younger patrons borrow printed books and browse the shelves at similar rates as older patrons.

In many ways, public libraries play a larger role in younger readers’ universes than for older adults. For instance, readers ages 16-17 are more likely than older patrons to have borrowed the last book they read from the library (37 percent) than they are to have purchased it (26 percent), a pattern that is reversed for older readers. And 36 percent of 16-17-year-olds get reading recommendations from a library or librarian, significantly more than older age groups. Most younger Americans under 30 also say it’s “very important” for libraries to provide books to the community.

Yet even as they use and value traditional library services, younger Americans are also interested in various new technologies at libraries. Younger patrons are more likely than older patrons to access the library’s Internet or computers. For instance, and three-quarters of Americans under 30 say it is “very important” for public libraries to provide free Internet access to their communities. Though relatively few patrons borrow e-books (about 5 percent of all recent library users have borrowed an e-book from the library), awareness is an issue for all age groups: 57 percent of Americans do not know if their local public library lends out e-books, including 53 percent of those under age 30.

Additionally, one of the most fascinating findings in our research was that young people are especially likely to value libraries as physical spaces. Some 60 percent of patrons ages 16-29 say they go to the library as a general gathering space (to study, sit and read, or watch or listen to media), significantly more than older patrons (See Figure 1).

Student Research in the Digital Age

In a survey and in focus groups we conducted last year among Advanced Placement (AP) and National Writing Project (NWP) teachers, we explored the degree to which the Internet and other digital technologies are shaping the way today’s middle and high school students “do research.”

Most educators agreed that the Internet and digital tools have had
a generally positive impact on their students’ research habits. Yet these teachers, who instruct some of the most academically successful middle and high school students in the United States, also observed many mixed effects. Our findings may best be summarized by something a teacher said in one of our focus groups: “The Internet makes doing research easier. Easier to do well and easier to do poorly.”

For instance, most teachers strongly agreed that the Internet “enables students to find and use resources that would otherwise not be available to them,” and many added that for motivated students, the Internet can offer previously unheard of opportunities. “Students are often in a rush,” one NWP teacher said. “However, when they are on to something that they are really keen on the chances of them being able to go deep increases dramatically.”

Yet sifting through all this information requires a much more sophisticated understanding of how to read and vet a source, a skill that many said students had not yet developed. In a focus group, one NWP teacher said, “I think research has gotten paradoxically simpler and more complex for students and everyone. It is so easy to find basic information on nearly any subject. However, there is enormous difficulty finding signals amid all the noise.”

At the heart of these teachers’ ambivalence is the unmediated nature of the Internet. Instead of searching for sources within a pre-approved set of resources, such as at a school library, or otherwise limited to the scope of published books and journals. This, teachers say, can be a blessing and a curse. As one NWP teacher said in a focus group, “availability and access to quality resources has never been greater, but it requires even more skill in filtering and sorting. This is an area where students and others have always struggled. It is labor intensive and always requires a growing understanding of the topic and field, which evolves over time.”

83 percent of teachers agree that the amount of information available online today is simply overwhelming for most students.

When we asked teachers how likely their students would be to use various resources, 94 percent said their students would be “very likely” to turn to Google or another search engine, with Wikipedia close behind at 75 percent (as shown in Figure 2). Less than one in five teachers said they expected their students to turn to textbooks (18 percent), online databases (17 percent), or research librarians (16 percent).

Most of the AP and NWP teachers surveyed strongly agreed that “search engines have conditioned students to expect to be able to find information quickly and easily.” One instructor said, “It kills me to see students typing in whole questions [such as] ‘What does it mean to leave a digital footprint on today’s society?’ into Google. The funny thing is they actually get disappointed when it doesn’t spit back an answer.”

### Teaching Online Skills

Though students need to learn digital research skills, teachers say there are no easy answers for how to teach them. Overall, 80 percent of teachers said they spend class time discussing how to assess the reliability of online information, though fewer spend time helping students improve their search queries (57 percent) or discuss how search engines work (35 percent).

Many teachers in our focus groups said they relied on their school’s English department to help students develop research skills, with some saying they did not feel qualified to teach many skills themselves. But other teachers said that digital research skills need to be taught by all teachers across the curriculum—and that library staff can be a key part of that process.

Teachers, pressed for time, employ a variety of methods, such as requiring a mix of offline and online sources. Some
teens and Tech

with "trustworthy" domains such as .gov, Wikipedia, or teach students to use sites teachers ban particular sources, such as .org, or.edu.

In another approach, some teachers said they require students to conduct their online research using only particular sites; nine in 10 teachers in our survey said they direct their students to specific online resources that they feel are most appropriate for a particular assignment. An instructor at a College Board school told us that due to time constraints, "rather than risk them going out and finding the wrong information ... you give them five sources and you say, "These are the approved sources. Do not go outside this realm." An AP teacher added, "The biggest challenge in any AP class in my experience is time. The volume and depth of the material is so extensive that finding the time to teach effective research is very difficult."

Some teachers searched for ways to make the process more relevant to students' interests. "I find fun material and they have to determine if it is credible or not and why. I pull material from various websites, to tabloids, to Internet e-mail hoaxes, to credible sources," one NWP teacher said. "I also teach this with visual literacy and we explore doctored images, etc. I love pulling an image of a website that states that something happened to their favorite celebrity. They debate what is true and how to find the truth."

Several public library staff members we spoke with in a separate piece of research echoed many of these findings, saying they often encountered confusion among both high school and college students over how to conduct research online. In some cases, students who were required to use non-Internet sources were unsure whether journal articles accessed via an online databases would be considered an "online source" by their instructors. "Their teachers say, 'No Internet resources. You can't use the Internet,'" one librarian said in a focus group. "You want to say, 'But this isn't really the Internet. It's not what your teacher meant'" (See Figure 3).

Overall, 91 percent of teachers agreed that being able to judge the quality of information is an "essential" skill in order for students to succeed in the future. Beyond students' need to do research for school or work, teachers cited a variety of areas where "digital literacy" of all sorts will be increasingly important.

One NWP teacher felt that today's students are operating in a more complex environment than previous generations—and need more help: "I would say that our students are asked to digest much more information than I ever was. That's got to be tough. It's tough to know which information to read deeply, which site will offer credible sources ... If anything, schools are slower to respond to the needs of students now than they were in the past. Maybe, this is why it is perceived that today's students are lagging behind those of the past."

Another teacher added, "If as educators, we do not accept the responsibility to teach our students the skills to navigate messages, information, multiple identities, and other demands that these technologies place on our youth, future generations will certainly fail to meet the current demands."

We have heard these same concerns echoed by public library staff, many of whom are calling on libraries to help patrons master the new tools for navigating all types of information. "Public libraries should be about educating the public to survive in today's world," one staff member wrote. "That involves not only the basic literacy that comes with books, but also a digital literacy to interact with the government and economy as it becomes increasingly paperless."

There seems to be a clear opportunity for libraries to help Americans of all ages navigate these complex digital resources. Adults already go to the Internet to help answer important or sensitive questions. 72 percent of online adults have looked online for health information within the past year, and 77 percent of them say they began their last session at a search engine (compared with 13 percent who say they began at a site that specializes in health information such as WebMD). Like teens, they generally feel confident with their abilities, with 91 percent of search engine users saying they always or most

Figure 3. "Essential" skills for students, according to teachers.

Among Advanced Placement and National Writing Project teachers surveyed, the percentage of teachers who feel each of the following skills is "essential" for their students to be successful in life.

<table>
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<th>Skill</th>
<th>Essential</th>
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<tr>
<td>Working with audio, video or graphic content</td>
<td>70</td>
</tr>
<tr>
<td>Presenting themselves effectively in online social networking sites</td>
<td>65</td>
</tr>
<tr>
<td>Finding information quickly</td>
<td>58</td>
</tr>
<tr>
<td>Communicating ideas in creative, engaging or interesting ways</td>
<td>52</td>
</tr>
<tr>
<td>Understanding privacy issues surrounding digital and online content</td>
<td>48</td>
</tr>
<tr>
<td>Behaving responsibly online</td>
<td>40</td>
</tr>
<tr>
<td>Writing effectively</td>
<td>40</td>
</tr>
<tr>
<td>Judging the quality of information</td>
<td>30</td>
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of the time find the information they are seeking when they use search engines.\(^\text{9}\)

Many librarians told us that they wished more patrons knew about libraries' databases and what they are capable of. "I don't think we make use of our subscription databases nearly as much as we could," one wrote. "Instead of seeing ourselves as diminishing in importance because of the 'digital divide,' we should see ourselves as important links to help patrons navigate the overwhelming sources of information out there."

"We should be guides," one librarian wrote. "If you are going into the information jungle of the World Wide Web and publications and databases and online books today, you need a guide. Someone who is familiar with the territory who can point you to the information and resources you seek. You need a guide; you need a librarian." YALS

**References**

2. Ibid.
7. Zickuhr, "Younger Americans' Library Habits."

**Guidelines for Authors**

*Young Adult Library Services* is the official publication of the Young Adult Library Services Association, a division of the American Library Association. *Young Adult Library Services* is a vehicle for continuing education of librarians working with young adults (ages twelve through eighteen) that showcases current research and practice relating to teen services and spotlights significant activities and programs of the division.

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